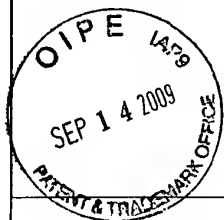


Form PTO-1449

Docket No. 223002010004

Application No.: 09/884,455

INFORMATION DISCLOSURE CITATION  
IN A PATENT

(several sheets followed)

Applicant:  
Michael Houghton et al.

Filing Date: June 18, 2001

Group Art Unit: 1656  
Examiner: William W. Moore  
Confirmation No.: 1938

Delivery Date: September 14, 2009

## U.S. PATENT DOCUMENTS

Examiner Initials	Ref. No.	Date	Document No.	Name	Class	Subclass	Filing Date if Appropriate
/W.M./	1.	09/27/94	5,350,671	Houghton et al.			
	<del>2.</del>	<del>12/13/94</del>	<del>5,372,928</del>	<del>Miyamura et al.</del>	→ Duplicate citation.		
/W.M./	3.	02/16/99	5,871,903	Miyamura et al.			

## FOREIGN PATENT DOCUMENTS

Examiner Initials	Ref. No.	Date	Document No.	Country	Class	Subclass	Translation YES NO
/W.M./	4.	04/24/85	EP 0 138 111 B1	Europe			
	<del>5.</del>	<del>05/31/89</del>	<del>EP 0 318 216 B1</del>	<del>Europe</del>	→ Duplicate citation.		
/W.M./	6.	06/01/89	WO 89/04669	PCT			

## OTHER DOCUMENTS

Examiner Initials	Ref. No.	OTHER DOCUMENTS (including author, title, date, etc.)
/W.M./	7.	Response to Chiron's Claim Chart Pursuant to Civil Local Rule 16-9(b) on U.S. Patent Nos. 5,371,017, 5,585,258 and 5,397,691 by Defendant Agouron Pharmaceuticals Incorporated. Chiron Corporation v. Agouron Pharmaceuticals, Inc.: Case No. C 98-2995 CW (PJH) (Related Cases C 98-9874 CW and C98-2994 CW). In the United States District Court, Northern District of California, Oakland Division, 67 pages. (08/04/1999)

EXAMINER: /William Moore/

DATE CONSIDERED: 09/29/2009

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/W.M./	8.	Joint Response to Chiron's Claim Chart Pursuant to Civil Local Rule 16-9(b) on U.S. Patent Nos. 5,371,017, 5,585,258 and 5,397,691 by Defendants Eli Lilly and Company and Vertex Pharmaceuticals Incorporated. Chiron Corporation v. Eli Lilly and Company, and Vertex Pharmaceuticals Inc.: Case No. C 98-2974 (Related Action Nos. C 98-2994 CW and C 98-2995 CW). In the United States District Court, Northern District of California, Oakland Division, 32 pages.
/W.M./	9.	Abrahmsén et al. (1986). "Secretion of heterologous gene products to the culture medium of <i>Escherichia coli</i> " <i>Nucl. Acids Res.</i> 14(18):7487-7500.
/W.M./	10.	Bazan et al. (1988). "Viral cysteine proteases are homologous to the trypsin-like family of serine proteases: Structural and functional implications" <i>PNAS</i> 85:7872-7876.
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/W.M./	12.	Bazan et al. (1989). "Viral branches of the trypsin-like protease family" in UCLA Symposia on Molecular & Cellular Biology, 18th Annual Meeting, <i>J. Cell. Biochem.</i> 13A:50 (Abstract A101).
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	16.	Boonmar et al. (1990). "Molecular Cloning of Hepatitis C Virus cDNA from Plasma of an Implicated Donor of Posttransfusion Non-A, Non-B Hepatitis" in <u>Proceedings of the 1990 International Symposium On Viral Hepatitis and Liver Disease</u> . Blaine et al. eds., Williams & Wilkins: Baltimore, pp. 371-374.
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/W.M./	52.	Meyers et al. (1989). "Molecular cloning and nucleotide sequence of the genome of hog cholera virus" <i>Virology</i> 171:555-567.
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↓	57.	Rice et al. (1986). "Partial-N-terminal amino acid sequences of three nonstructural proteins of two flaviviruses" <i>Virology</i> 151:1-9.
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/W.M./	64.	Strauss et al. (1991). "Structure and function of the flavivirus and pestivirus genomes" in <u>Viral Hepatitis and Liver Disease: Proceedings of the 1990 International Symposium on Viral Hepatitis and Liver Disease: Contemporary Issues and Future Prospects</u> , Hollinger et al. eds. pp. 333-334.
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WM/	100.	11/20/1973	3,773,924	Ho et al.			
	101.	05/13/1975	3,883,497	Gregory et al.			
	102.	06/02/1981	4,271,145	Wands et al.			
	103.	10/26/1982	4,356,164	Tabor et al.			
	104.	07/26/1983	4,395,395	Tabor et al.			
	105.	02/14/1984	4,431,740	Bell et al.			
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	110.	03/24/1987	4,652,525	Rutter et al.			
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	117.	08/28/1990	4,952,493	Kettner et al.			
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/W.M./	124.	07/21/1992	5,132,213	Bachmair et al.			
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/W.M./	149.	02/03/1998	5,714,371	Ramanathan et al.			
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↓	151.	04/14/1998	5,739,002	De Francesco et al.			
↓	152.	05/05/1998	5,747,240	Kink et al.			
↓	153.	05/05/1998	5,747,241	Miyamura et al.			
↓	154.	05/05/1998	5,747,339	Okayama et al.			
↓	155.	06/02/1998	5,759,795	Jubin			
↓	156.	06/16/1998	5,766,916	Belyaev et al.			
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↓	161.	01/26/1999	5,863,719	Houghton et al.			
/W.M./	162.	02/23/1999	5,874,565	Rice et al.			
	<del>163.</del>	<del>03/23/1999</del>	<del>5,885,799</del>	<del>Houghton et al.</del>			Duplicate citation.
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↓	167.	02/22/2000	6,027,729	Houghton et al.			
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↓	170.	09/12/2000	6,117,639	Germann et al.			
↓	171.	10/03/2000	6,127,116	Rice et al.			
↓	172.	11/14/2000	6,147,100	Seno et al.			
/W.M./	173.	11/28/2000	6,153,579	Kim et al.			

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Examiner Initials	Ref. No.	Date	Document No.	Name	Class	Subclass	Filing Date if Appropriate
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	179.	09/01/1982	0 058 676	Europe				
	180.	10/06/1982	0 061 974	Europe				
	181.	12/08/1982	0 066 296	Europe				
	182.	01/05/1983	0 068 465	Europe				
	183.	02/16/1983	0 071 640	Europe				
	184.	03/30/1983	0 074 986	Europe			Abstract	
	185.	10/26/1983	0 092 249	Europe				
	186.	08/22/1984	0 116 201	Europe				
	187.	10/03/1984	0 120 551	Europe				
	188.	11/14/1984	0 124 896	Europe			Abstract	
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/W.M./	190.	09/11/1985	0 154 392	Europe				

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	193.	08/13/1986	0 190 972	Europe				
	194.	09/10/1986	0 194 207	Europe				
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	196.	01/14/1987	0 208 672	Europe				
	197.	10/21/1987	0 242 300	Europe			Abstract	
	198.	04/13/1988	0 263 761	Europe				
	199.	08/10/1988	0 277 437	Europe			Abstract	
	200.	08/24/1988	0 279 460	Europe			Abstract	
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	202.	10/04/1989	0 335 135	Europe				
	203.	11/08/1989	0 340 986	Europe				
	204.	04/11/1990	0 363 025	Europe				
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	206.	09/19/1990	0 388 232	Europe				
	207.	02/27/1991	0 414 475	Europe				
	208.	03/13/1991	0 416 725	Europe				
	209.	03/27/1991	0 419 182	Europe				
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/W.M./	211.	10/09/1991	0 450 931	Europe				
	212.	10/16/1991	0 451 891	Europe				
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	214.	01/29/1992	0 468 657	Europe				
	215.	04/08/1992	0 479 376	Europe				
	216.	09/01/1999	0 939 128	Europe				
	217.	07/22/1988	2 609 807	France			Abstract	
	218.	06/26/1991	GB 2 239 245	Great Britain				
	219.	01/21/1982	WO 82/00205	WIPO				
	220.	08/19/1982	WO 82/02774	WIPO				
	221.	10/14/1982	WO 82/03330	WIPO				
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	223.	02/26/1987	WO 87/01131	WIPO				
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	226.	05/19/1988	WO 88/03410	WIPO				
	227.	08/25/1988	WO 88/06184	WIPO				
	228.	11/16/1989	WO 89/10931	WIPO				
	229.	12/28/1989	WO 89/12462	WIPO				
/W.M./	230.	12/28/1989	WO 89/12641	WIPO				

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	232.	09/07/1990	WO 90/10060	WIPO				
	233.	09/07/1990	WO 90/10075	WIPO				
	234.	10/04/1990	WO 90/11089	WIPO				
	235.	04/04/1991	WO 91/04262	WIPO				
	236.	05/02/1991	WO 91/05801	WIPO				
	237.	10/17/1991	WO 91/15575	WIPO				
	238.	10/17/1991	WO 91/15596	WIPO				
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	240.	01/09/1992	WO 92/00328	WIPO				
	241.	03/05/1992	WO 92/03458	WIPO				
	242.	01/21/1993	WO 93/01305	WIPO				
	243.	11/10/1994	WO 94/25064	WIPO				
	244.	11/10/1994	WO 94/25601	WIPO				
	245.	11/10/1994	WO 94/25602	WIPO				
	246.	01/19/1995	WO 95/02059	WIPO				
	247.	01/19/1995	WO 95/02065	WIPO				
	248.	08/31/1995	WO 95/22985	WIPO				
✓	249.	02/22/1996	WO 96/05513	WIPO				
/W.M./	250.	05/09/1996	WO 96/13590	WIPO				

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/W.M./	251.	11/07/1996	WO 96/34976	WIPO				
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	253.	11/14/1996	WO 96/35717	WIPO				
	254.	11/21/1996	WO 96/36702	WIPO				
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	256.	04/03/1997	WO 97/09349	WIPO				
	257.	04/03/1997	WO 97/12033	WIPO				
	258.	04/03/1997	WO 97/12043	WIPO				
	259.	10/09/1997	WO 97/36554	WIPO				
	260.	10/16/1997	WO 97/38117	WIPO				
	261.	01/08/1998	WO 98/00548	WIPO				
	262.	03/19/1998	WO 98/11134	WIPO				
	263.	03/26/1998	WO 98/12308	WIPO				
	264.	04/02/1998	WO 98/13482	WIPO				
	265.	04/23/1998	WO 98/16657	WIPO				
	266.	04/30/1998	WO 98/17679	WIPO				
	267.	05/28/1998	WO 98/22496	WIPO				
↓	268.	08/27/1998	WO 98/37180	WIPO				
/W.M./	269.	10/01/1999	WO 99/50230	WIPO				

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	902.	Answer of Defendant Eli Lilly and Company. Chiron Corporation v. Eli Lilly and Company, and Vertex Pharmaceuticals, Inc.: Case No. C-98-2974 CW ENE. In the United States District Court, Northern District of California. 09/21/98
	903.	Defendant Gilead Sciences, Inc.'s Answer to Complaint and Counterclaims, Chiron Corporation v. Gilead Sciences, Inc.: Case No. C-98-2994 VRW, United States District Court, Northern District of California. 09/21/98
	904.	Answer and Counterclaims of Defendant Agouron Pharmaceuticals, Inc. Chiron Corporation v. Agouron Pharmaceuticals, Inc.: Civil Action No. C-98-2995 SI. United States District Court, Northern District of California. 10/01/98
	905.	Defendant Gilead Sciences, Inc.'s Initial Disclosure of Prior Art Pursuant to Civil Local Rule 16-7. Chiron Corporation v. Gilead Sciences, Inc., and Related Actions: Case No. C-98-2994 CW. United States District Court, Northern District of California. 11/10/98
	906.	Vertex's Initial Disclosure of Prior Art for U.S. Patent Nos. 5,371,017, 5,585,258 and 5,597,691 under Local Rule 16-7(d). Chiron Corporation v. Eli Lilly and Company, and Vertex Pharmaceuticals Inc. Civil No. 98-2974 CW (ENE). United States District Court, Northern District of California. 11/12/98
	907.	Lilly's Initial Disclosure of Prior Art for U.S. Patent Nos. 5,371,017, 5,585,258, and 5,597,691 Under Local Rule 1607(d)-(f). 11/12/98
	908.	Agouron's Initial Disclosure of Prior Art Pursuant to Local Rules 16-7(d) and (e). Chiron Corporation v. Agouron Pharmaceuticals, Inc. Civil Action No. C-98-2995 CW. 11/12/98
	909.	Answer of Defendant Vertex Pharmaceuticals Incorporated. Chiron Corporation v. Eli Lilly & Co., and Vertex Pharmaceuticals Incorporated. Case No.: C-98-2974 CW [PJH], Related Action Nos: C-98-2994 CW [PJH] and C-98-2995. 02/01/99
	910.	Vertex's First Supplemental Disclosure of Prior Art for U.S. Patent Nos. 5,371,017, 5,585,258 and 5,597,691 Under Local Rule 16-7(d). Chiron Corporation v. Eli Lilly and Company, and Vertex Pharmaceuticals Inc. Civil No. 98-2974 CW (PJH), Related Action Nos. C-98-02994 CW [PJH] and C-98-02995 CW [PJH]. 02/05/99
W.M./	911.	Vertex's Second Supplemental Disclosure of Prior Art for U.S. Patent Nos. 5,371,017, 5,585,258 and 5,597,691 Under Local Rule 16-7(d). Chiron Corporation v. Eli Lilly and Vertex Pharmaceuticals Inc. Civil No. 98-2974 CW (PJH), Related Action Nos. C-98-02994 CW [PJH] and C-98-02995 CW [PJH]. 02/12/99

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/W.M./	912.	Gilead Sciences, Inc.'s Response to Chiron's Proposed Claim Construction Statement on the '017, '258 and '691 Patents Pursuant to Local Rule 16-10(b). Chiron Corporation v. Gilead Sciences, Inc. Case No. C-98-2994 CW [PJH]. 03/22/99
↓	913.	Response Chart to Chiron's Claim Chart on U.S. Patent Nos. 5,371,017, 5,585,258 and 5,397,691 Pursuant to Local Rule 16-9(b) by Defendant Gilead Sciences, Inc. Case No. C-98-2994 CW [PJH]. 03/22/99
↓	914.	Response Chart to Chiron's Claim Chart on U.S. Patent Nos. 5,371,017, 5,585,258 and 5,397,691 Pursuant to Local Rule 16-9(b) by Defendant and Counterclaimant Gilead Sciences, Inc. Chiron Corporation v. Gilead Sciences, Inc. Case No. C-98-2994 CW [PJH], Related Action Nos. C-98-02995 CW [PJH] and C-98-02974 CW [PJH]. 03/22/99
↓	915.	Agouron's Response Chart to Chiron's Claim Chart on U.S. Patent Nos. 5,371,017, 5,585,258 and 5,397,691 Pursuant to Local Rule 16-9(b). Chiron Corporation v. Agouron Pharmaceuticals, Inc. Case No. C-98-2995 CW [PJH], Related Cases C-98-9874 CW and C-98-2994 CW. 08/04/99
↓	916.	Eli Lilly and Company's First Supplemental Disclosure of Prior Art for U.S. Patent Nos. 5,371,017, 5,585,258, and 5,597,691 Pursuant to Civil Local Rule 16-7(d). Chiron Corporation v. Eli Lilly and Company, and Vertex Pharmaceuticals, Inc. Case No. C-98-2974 CW, Related Action Nos. C-98-2994 CW and C-98-2995 CW. 08/04/99.
↓	917.	Vertex's Third Supplemental Disclosure of Prior Art for U.S. Patent Nos. 5,371,017, 5,585,258 and 5,597,691 Under Local Rule 16-7(d). Chiron Corporation v. Eli Lilly and Company, and Vertex Pharmaceuticals Incorporated. Civil No. 98-2974 CW (PJH), Related Action Nos. C-98-02994 CW [PJH] and C-98-02995 CW [PJH]. 08/04/99.
↓	918.	Joint Claim Construction Statement Pursuant to Local Rule 16-11(b). Chiron Corporation v. Eli Lilly & Co., Vertex Pharmaceuticals, Inc. No. C-98-02974 CW [PJH], Related Action Nos. C-98-02995 CW [PJH] and C-98-02994 CW [PJH]. 09/07/99.
↓	919.	Amended Response Chart Pursuant to Civil Local Rule 16-9(b) by Defendants Eli Lilly and Company and Vertex Pharmaceuticals Incorporated. Chiron Corporation v. Eli Lilly and Company and Vertex Pharmaceuticals Inc. Case No. C-98-2974 CW, Related Action Nos. C-98-2994 CW and C-98-2995 CW. 10/22/99.
↓	920.	Amended Response Chart Pursuant to Civil Local Rule 16-9(b) by Defendants Eli Lilly and Company and Vertex Pharmaceuticals Inc. Chiron Corporation v. Eli Lilly and Company and Vertex Pharmaceuticals, Inc. Case No. C-98-2974 CW, Related Action Nos. C-98-2994 CW and C-98-2995 CW. 10/22/99
/W.M./	921.	Amended Response Chart Pursuant to Civil Local Rule 16-9(b) by Defendants Eli Lilly and Company and Vertex Pharmaceuticals Incorporated. Chiron Corporation v. Eli Lilly and Company and Vertex Pharmaceuticals, Inc. Case No. C-98-2974 CW, Related Action Nos. C-98-2994 CW and C-98-2995 CW. 11/18/99.

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W.M./	922.	Findings of Fact, Conclusions of Law and Proposed Order for Motion 4A by Defendants Agouron Pharmaceuticals, Inc. Chiron Corporation v. Agouron Pharmaceuticals, Inc. Case No. C 98-2995 CW (PJH)
	923.	Eli Lilly and Company's and Vertex Pharmaceutical Incorporated's Proposed Findings of Fact and Conclusions of Law in Support of a Judgment to Pierce Attorney-Client Privilege and Work Product Immunity Under the Crime-Fraud Exception. Chiron Corporation v. Eli Lilly and Company and Vertex Pharmaceuticals, Inc. Case Nos. C-98-2974 CW and C-98-2995 CW.
	924.	Reporter's Transcript of Proceedings Before Special Masters Catherine A. Yanni and David W. Yount. Chiron Corporation v. Eli Lilly and Company and Vertex Pharmaceuticals, Inc.; Chiron Corporation v. Gilead Sciences, Inc.; Chiron Corporation v. Agouron Pharmaceuticals, Inc. Case Nos. C-98-2974 CW ENE, C-98-2994 CW and C-98-2995 CW. 5/24/2000.
	925.	Hearing Before Special Master. Chiron Corporation v. Eli Lilly and Company and Vertex Pharmaceuticals, Inc.; Chiron Corporation v. Gilead Sciences, Inc.; Chiron Corporation v. Agouron Pharmaceuticals, Inc. Case Nos. C-98-2974 CW ENE, C-98-2994 CW and C-98-2995 CW. 9/8/1999.
	926.	Agouron Pharmaceuticals, Inc. for Request for Examination regarding Patent No. 5,371,017 filed on December 6, 1999 with exhibits thereto.
	927.	Vertex's Objections and Responses to Chiron's First Set of Interrogatories. Chiron Corporation v. Eli Lilly & Co. and Vertex Pharmaceuticals Inc. Civil No. C-98-2974 CW [PJH], Related Action Nos. C-98-2994 CW [PJH] and C-98-2995 CW [PJH]. 03/22/99
	928.	Defendant Eli Lilly and Company's Response to Chiron's First Set of Interrogatories. Chiron Corporation v. Eli Lilly and Company and Vertex Pharmaceuticals Inc. Case Nos. C-98-2974 CW [PJH], Related Action Nos. C-98-2994 CW and C-98-2995 CW. 03/22/99
	929.	Agouron's Supplemental Objections and Responses to Chiron's First Set of Interrogatories (Nos. 1-16). Chiron Corporation v. Agouron Pharmaceuticals, Inc. Case No. C-98-02995 CW [PJH], Related Action Nos. C-98-02974 CW [PJH] and C-98-02994 CW [PJH]. 08/19/99
	930.	Chiron's Responses to Vertex's First Set of Requests to Admit (Nos. 1-9). Chiron Corporation v. Eli Lilly and Company and Vertex Pharmaceuticals Inc. No. C-98-02974 CW [PJH], Related Case Nos. C-98-02994 CW [PJH] and C-98-02995 CW [PJH]. 12/08/99
W.M./	931.	Chiron's Answers to Agouron's First Set of Interrogatories (Nos. 1-19). Chiron Corporation v. Agouron Pharmaceuticals, Inc. No. C-98-02995 CW [PJH], Related Case No. C-98-02974 CW [PJH]. 01/25/00
W.M./	932.	Chiron's Responses to Vertex's Second Set of Requests to Admit (Nos. 10-42). Chiron v. Eli Lilly and Company and Vertex Pharmaceuticals Inc. No. C-98-02974 CW [PJH], Related Action No. C-98-02995 CW [PJH]. 02/01/00

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W.M./	933.	Chiron's Responses to Lilly's First Set of Requests to Admit (Nos. 1-50). Chiron Corporation v. Eli Lilly and Company and Vertex Pharmaceuticals Inc. No. C-98-02974 CW [PJH], Related Action No. C-98-02995 CW [PJH]. 02/01/00
	934.	Chiron's Responses to Agouron's First Set of Requests to Admit, and Subtended Interrogatories and Document Requests. Chiron Corporation v. Agouron Pharmaceuticals, Inc. No. C-98-02995 CW [PJH], Related Case No. C-98-02974 CW [PJH]. 02/04/00
	935.	Chiron's Supplemental Answers to Vertex's Second Set of Interrogatories (Nos. 8, 13-15). Chiron Corporation v. Eli Lilly and Company and Vertex Pharmaceuticals Inc. No. C-98-02974 CW [PJH], Related Case No. 98-02995 CW [PJH]. 02/16/00
	936.	Chiron's Supplemental Responses to Vertex's Second Set of Request to Admit (Nos. 23 and 37). Chiron Corporation v. Eli Lilly and Company and Vertex Pharmaceuticals Inc. No. C-98-02974 CW [PJH], Related Action No. C-98-02995 CW [PJH]. 05/31/00
	937.	Chiron's Supplemental Responses to Lilly's First Set of Requests to Admit (Nos. 2, 24, 37 and 49), Chiron Corporation v. Eli Lilly and Company and Vertex Pharmaceuticals Inc. No. C-98-02974 CW [PJH], Related Action No. C-98-02995 CW [PJH]. 05/31/00
	938.	Chiron's Supplemental Answers to Agouron's First Set of Interrogatories (Nos. 15-19). Chiron Corporation v. Agouron Pharmaceuticals, Inc. No. C-98-02995 CW [PJH], Related Case No. C-98-02974 CW [PJH]. 06/12/00
	939.	Chiron Corporation's Responses to Defendant Eli Lilly and Company's Supplemental Interrogatories. Chiron v. Eli Lilly and Company and Vertex Pharmaceuticals Inc. No. C-98-02974 CW [PJH], Related Case No. C-98-02995 CW [PJH]. 06/12/00
	940.	Chiron's Supplemental Responses to Agouron's First Set of Requests to Admit (Nos. 12-15 & 17-23). Chiron Corporation v. Agouron Pharmaceuticals, Inc. No. C-98-02995 CW (PJH), Related Case No. C-98-02974 CW [PJH], Related Case No. C-98-02974 CW [PJH]. 07/19/00
	941.	Chiron's Second Supplemental Responses to Vertex's Second Set of Requests to Admit. Chiron Corporation v. Eli Lilly and Company and Vertex Pharmaceuticals Inc. No. C-98-02974 CW [PJH], Related Action No. C-98-02995 CW [PJH]. 08/21/00
W.M./	942.	Chiron's Second Supplemental Responses to Lilly's First Set of Requests to Admit. Chiron Corporation v. Eli Lilly and Company and Vertex Pharmaceuticals Inc. No. C-98-02974 CW [PJH], Related Action No. C-98-02995 CW [PJH]. 08/21/00
	<del>943.</del>	<del>Duplicate of Reference No. 938.</del> W.M./
W.M./	944.	Excerpt from Laboratory Notebook of Qui-Lim Choo dated June 9, 1989, page 9.
W.M./	945.	Excerpt from Laboratory Notebook of Qui-Lim Choo dated August 22, 1989, page 25.

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/W.M./	946.	Civil Action No. C 98-2974 (CW) Chiron Corporation v. Eli Lilly, Subpoena in a civil case duces tecum, Ex. 524 at 1/25/00 deposition of A. Gorbalenya.
	947.	Transcript of deposition of Dr. Alexander E. Gorbalenya in Civil Action No. C-98-02974 (related cases Nos. C-98-02994 CW and C-98-0295 CW) in Chiron Corp. v. Eli Lilly and Co. and Vertex Pharmaceuticals, Inc. before the U.S. District Court Northern District of California, Oakland Division (January 25, 2000).
	948.	Letter from H.-J. Thiel to A. Gorbalenya dated September 11, 1990, Ex. 515 at 1/25/00 deposition of A. Gorbalenya.
	949.	Letter from H.-J. Thiel to A. Gorbalenya dated December 28, 1990, Ex. 519 at 1/25/00 deposition of A. Gorbalenya.
	950.	Letter from A. Gorbalenya to M. Collett dated March 28, 1989, Ex. 512 at 1/25/00 deposition of A. Gorbalenya.
	951.	Letter from H.-J. Thiel to A. Gorbalenya dated October 24, 1990, Ex. 517 at 1/25/00 deposition of A. Gorbalenya.
	952.	Letter from A. Gorbalenya to M. Houghton dated May 20, 1990, Ex. 514 at 1/25/00 deposition of A. Gorbalenya.
	953.	Letter from A. Gorbalenya to H.-J. Thiel dated December 1990, Ex. 518 at 1/25/00 deposition of A. Gorbalenya.
	954.	Letter from A. Gorbalenya to S. Siddell dated February 17, 1991, part of Ex. 520 at 1/25/00 deposition of A. Gorbalenya.
	955.	Letter from S. Siddell to A. Gorbalenya dated March 5, 1991, Ex. 521 at 1/25/00 deposition of A. Gorbalenya.
	956.	Letter from A. Gorbalenya and E. Koonin to S. Siddell dated June 4, 1991, Ex. 523 at 1/25/00 deposition of A. Gorbalenya.
	957.	Letter from M. Collett to A. Gorbalenya dated April 13, 1989, Ex. 513 at 1/25/00 deposition of A. Gorbalenya.
↓	958.	The Journal of Virology "Referee's report on Paper" March 11, 1991, part of Ex. 522 at 1/25/00 deposition of A. Gorbalenya.
/W.M./	959.	The Journal of General Virology, receipt for manuscript from A. Gorbalenya dated 4.3.91 and manuscript entitled "Hepatitis C virus encodes a putative serine protease related to the proteases of flavi- and pestiviruses," both part of Ex. 520 at 1/25/00 deposition of A. Gorbalenya.

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/W.M./	960.	The Journal of General Virology, "Referee's report on Paper" February 28, 1991, part of Ex. 522 at 1/25/00 deposition of A. Gorbalenya.
	961.	Chiron Laboratory Notebook #1298, pp. 184-190, 192 (Nov., 1986); (previously considered in US 08/103,961, reference I.A.117).
	962.	Independent Legal Opinion Concerning Hepatitis C Inventorship Dispute", Jun. 1991; (previously considered in US 08/103,961, reference I.A.109).
	963.	Inventorship Opinion of Gladys Monroy dated Jun. 7, 1988; (previously considered in US 08/103,961, reference I.A.119).
	964.	Letter dated Oct. 16, 1989 from Mr. Lanman of the NIH to Robert Blackburn of Chiron Corporation.
	965.	Memorandum by Dr. Houghton, dated Nov. 10, 1987; (previously considered in US 08/103,961, reference I.A.118).
	966.	Memorandum by Dr. Michael Houghton (undated); (previously considered in US 08/103,961, reference I.A.116).
	967.	Memorandum dated Nov. 11, 1987 by Dr. Michael Houghton; (previously considered in US 08/103,961, reference I.A.115).
	968.	Memorandum Re Interview of Dr. Daniel Bradley dated Apr. 11, 1991; (previously considered in US 08/103,961, reference I.A.112).
	969.	Memorandum Re Interview of Dr. Lacy Overby dated Jun. 21, 1991; (previously considered in US 08/103,961, reference I.A.114).
	970.	Memorandum Re Interview of Dr. Michael Houghton dated May 8, 1991; (previously considered in US 08/103,961, reference I.A.111).
	971.	Memorandum Re Interviews of Dr. Amy Weiner and Dr. Gary Van Nest dated Apr. 30, 1991; (previously considered in US 08/103,961, reference I.A.113).
	972.	Memorandum Re Interviews of Dr. Qui-Lim Choo and Dr. George Kuo dated May 8, 1991; (previously considered in US 08/103,961, reference I.A.110).
	973.	Excerpts of the deposition testimony of Drs. Houghton, Choo and Kuo in Civil Action Nos. C-98-02995 CN and C-98-02974 CW.
/W.M./	974.	Excerpts of the deposition testimony of Drs. Houghton and Choo in Civil Action Nos. C-98-02995 CN and C-98-02974 CW.

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## U.S. PATENT DOCUMENTS

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WM/	975.	04/04/1990	07/505,434	Rosenberg application			
↓	976.	04/04/1991	07/680,358	Rosenberg application			
	977.	09/28/1992	07/956,433	Rosenberg application			
	978.	09/02/1993	08/116,048	Rosenberg application			
	979.	06/06/1994	08/254,496	Rosenberg application			
	980.	11/04/1986	4,620,948	Builder et al.			
	981.	11/15/1988	4,784,950	Hagen et al.			
	982.	05/29/1990	4,929,700	Halenbeck et al.			
	983.	06/05/1990	4,931,543	Halenbeck et al.			
↓	984.	12/11/1990	4,977,248	Creighton			
	985.	11/10/1992	5,162,507	Wolfe et al.			
WM/	986.	05/17/1994	5,312,737	Bolling et al.			

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WM/	987.	02/10/1994	DE4240980	Germany			Abstract	
↓	988.	12/14/1989	DE P3819846	Germany			Abstract	
	989.	04/08/1987	0 217 645	Europe				
	990.	04/29/1987	0 219 874	Europe			Abstract	
	991.	06/19/1991	0 433 225	Europe				
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	993.	01/06/1989	64-02576	Japan			Abstract	
↓	994.	05/17/1989	1-124387	Japan			Abstract	
	995.	11/22/1994	6-319583	Japan			Abstract	
WM/	996.	07/22/1997	9-187285	Japan			Abstract	

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/W.M./	997.	Genbank Data Base Accession No. GNWVC3 (May 26, 2000).
	998.	Genbank Data Base Accession No. 3114526 (December 12, 1997).
	999.	Alter et al. (November 1, 1975) "Clinical and serological analysis of transfusion-associated hepatitis" <i>Lancet</i> 7940:838-841.
	1000.	Ayoola EA. (October 1984). "Circulating immune complexes and serum complement in Nigerian patients with non-A, non B hepatitis." <i>East. Afr. Med. J.</i> 61(10):752-756.
	1001.	Bazan, J.F. (1989) "Viral branches of the trypsin-like proteinase family" Viral proteinases as targets for chemotherapy: in <u>Current Communications in Molecular Biology</u> , Krausslich et al., eds., Cold Spring Laboratory Press, New York, pp. 55-62.
	1002.	Blight, K. J. et al. (1998). "Molecular virology of hepatitis C virus: an update with respect to potential antiviral targets" <i>Antiviral Therapy</i> 3(Suppl. 3):71-81.
	1003.	Bradley, D.W. et al., (1983) "Non-A, Non-B hepatitis: Research progress and current perspectives" <i>Dev. Biol. Standard</i> , Second WHO/IABS Symposium on Viral Hepatitis, Athens, Greece, 1982, 54:463-473.
	1004.	Bradley, D.W. et al. (1986). "Etiology and natural history of post-transfusion and enterically-transmitted non-A, non-B hepatitis." <i>Semin Liver Dis.</i> 6(1):56-66.
	1005.	Bradley, D.W. et al. (April 1988). "Virus of enterically transmitted non-A, non-B hepatitis" <i>Lancet</i> 1(8589):819.
	1006.	Burckhardt et al. (1988). "A hepatitis non-A, non-B-associated substance in the feces--identification and cloning of a partially double-stranded circular DNA." <i>Immun Infekt.</i> 16(3):91-96, article with English abstract.
	1007.	Burckhardt et al. (1988). "Hepatitis non-A, non-B-associated DNA--demonstration of DNA in proven infectious anti-D-immunoglobulin." <i>Immun Infekt.</i> 16(3):97-99, article with English abstract.
	1008.	Burow, B.V. (1982) "Klinischer verlauf und prognose der virushepatitis c--prospektive studie über zwei jahre" <i>Klinische Medizin, Dt. Gesundh.-Wesen</i> 37, Heft 2, pp. 56-60, with English abstract.
↓	1009.	Calisher et al. (1988) "Chapter 2: Arbovirus Serogroups: Definition and Geographic Distribution", <u>The Arboviruses: Epidemiology and Ecology</u> , Volume 1, Monath, T.P. ed., CRC Press, Inc., pp. 19-57.
/W.M./	1010.	Carloni, G. et al. (1993). "Susceptibility of human liver cell cultures to hepatitis C virus infection." <i>Arch Virol [Suppl]</i> 8:31-39.

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W.M./	1011.	Chambers et al. (November 1990). "Evidence that the N-terminal domain of nonstructural protein NS3 from yellow fever virus is a serine protease responsible for site-specific cleavages in the viral polyprotein." <i>Proc Natl Acad Sci U S A.</i> 87(22):8898-8902.
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	1018.	De Bree F.M. et al. (August 1998). "Preparation and characterization of the recombinant selenomethionine analogue of insulin-like growth factor-I." <i>Protein Expr Purif.</i> 13(3):319-325.
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Form PTO-1449	Docket No. 22300201 0004	Application No.: 09/884,455
INFORMATION DISCLOSURE CITATION IN A PATENT  <i>(several sheets followed)</i>	Applicant: Michael Houghton et al.	
	Filing Date: June 18, 2001	Group Art Unit: 1656 Examiner: William W. Moore Confirmation No.: 1938
	Delivery Date: September 14, 2009	

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/W.M./	1036.	Lin, C. (1997) "The hepatitis C virus NS4A protein: interactions with the NS4B and NS5A proteins" <i>4th International Meeting on Hepatitis C virus and related viruses, Molecular Virology and Pathogenesis</i> , March 6-10, 1997, Kyoto International Conference Hall, Japan, page 20, abstract.

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	Delivery Date: September 14, 2009	

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/W.M./	1051.	Sherman, G. et al. (1997) "Development of a permanent cell line which expresses HCV nonstructural proteins" <i>Abstracts of the 37th Interscience Conference on Antimicrobial Agents and Chemotherap</i> , September 28-October 1, 1997, Toronto, Ontario, Canada 37:217, Abstract No. H-20.
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## FOREIGN PATENT DOCUMENTS

Examiner Initials	Ref. No.	Date	Document No.	Country	Class	Subclass	Translation YES NO
/W.M./							/W.M./

OTHER DOCUMENTS *(including author, title, Date, Pertinent Pages, Etc.)*

Examiner Initials	Ref. No.	Title
/W.M./	1058.	Agouron's Request for Reexamination of U.S. Patent No. 5,585,258 and appendix.
/W.M./	1059.	Order re: Defendant Agouron's Motion For <i>In Camera</i> Review of Various Chiron Documents Pursuant to the Crime-Fraud Exception to the Attorney-Client Privilege. Special Master Yanni, Case No. C-98-2974 CW, Related Action Nos. C-98-2994 CW and C-98-2995 CW. United States District Court, Northern District of California. 4/16/01.

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/W.M./	1060.	Clerk's Notice Deeming Objection Denied, Chiron Corporation v. Agouron Pharmaceutical, Inc., in Civil Action No. Case No. C-98-2995 CW, June 12, 2001, 3 pages.
↓	1061.	Order re: Defendants Lilly and Vertex's Crime-Fraud Motion in Civil Action No. C-98-02974 CW (PJH) (related cases Nos. C-98-02994 CW (PJH) and C-9802995 CW (PJH) in Chiron Corp. v. Eli Lilly and Co. and Vertex Pharmaceuticals, Inc. before the U.S. District Court of Northern District of California, Oakland Division June 11, 2001, pp. 1-25.
↓	1062.	Anonymous, (May 16, 1988) "Chiron wins non-A, non-B virus race; rivals concede" <i>Biotechnology Newswatch</i> , 8(10):1 and 3.
↓	1063.	Anonymous, (August 7, 1989) "Hepatitis C antigens cloned" <i>Biotechnology Newswatch</i> , one page.
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	1071.	Bradley, D.W. et al., (1990) "The viruses of non-A, non-B hepatitis" <i>VIIIth International Congress of Virology</i> , Berlin, Abstract W11-001.
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/W.M./	1077.	Gravelle, C.R. et al., (June 1982) "Temporal patterns of ultrastructural alterations in hepatocytes of chimpanzees with experimental non-A, non-B hepatitis" <i>The Journal of Infectious Diseases</i> 145(6):854-858.

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	Delivery Date: September 4, 2009	

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/W.M./	1078.	Griffith, V. (February 25, 1997) "A cure in search of diseases: researchers aim to extend protease inhibitor's success against Aids to other disorders", <i>Financial Times Limited (London)</i> , page 15.
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↓	1080.	Pletnev, A.G. et al., (January 1990) "Nucleotide sequence of the genome and complete amino acid sequence of the polyprotein of tick-borne encephalitis virus" <i>Virology</i> 174(1):250-263.
↓	1081.	Russell, P.K. et al., (1980) "Chemical and antigenic structure of flaviviruses" Chapter 18, in <u>The Togaviruses, Biology, Structure, Replication</u> , Schlesinger, R.W., ed., Academic Press, pp. 503-529.
↓	1082.	Sherman, G. et al., "Development of a permanent cell line which expresses hcv nonstructural proteins" Abstract No. H-20, one page.
↓	1083.	Sudo et al., (1997) "Novel hepatitis C virus protease inhibitors: 2,4,6-trihydroxy, 3-nitro-benzamide derivatives." <i>Antiviral Chemistry &amp; Chemotherapy</i> , 8(6):541-544.
↓	1084.	Tabor, E. et al., (1979) "Detection of an antigen-antibody system in serum associated with human non-A, non-B hepatitis" <i>Journal of Medical Virology</i> 4:161-169.
↓	1085.	Tainer, J.A. et al. (1991) "Metal-binding sites in proteins" <i>Curr Opin Biotechnol.</i> 2(4):582-591.
↓	1086.	Tsiang, M. "Substrate specificity of HCV NS3 genome analyzed with modified peptide substrates" <i>Antiviral Research</i> Abstract No. 180, one page.
↓	1087.	Villarejos, V.M. et al., (1984) "Observations on an antigen-antibody system related to non-A, non-B hepatitis" Chapter 28 in <u>Viral Hepatitis and Liver Disease</u> , G.N. Vyas et al., eds., Grune and Stratton, 367-369.
/W.M./	1088.	Villareal et al. (January 27, 1997) "Structural Bioinformatics, Inc. and CyberChemics, Inc. collaborate to speed the generation of hepatitis C viral protease inhibitors" <i>Business Wire</i> , p1270170, located in Dialog database in file 649, fulltext, 2 pages.

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Examiner Initials	Ref. No.	OTHER DOCUMENTS <i>(including author, title, date, etc.)</i>
/W.M./	1089.	Order Following <i>In Camera</i> Review of Chiron's Privileged Documents Pursuant to Agouron Crime-Fraud Motion in Civil Action No. C-98-02974 CW (PJH) (related cases Nos. C-98-02994 CW (PJH) and C-9802995 CW (PJH) in Chiron Corp. v. Eli Lilly and Co. and Vertex Pharmaceuticals, Inc. before the U.S. District Court of Northern District of California, Oakland Division July 18, 2001, 5 pages.

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/W.M./	1090.	06/16/1987	4,673,634	Seto et al.			
/W.M./	1091.	10/27/1987	4,702,909	Villarejos et al.			
	<del>1092.</del>	<del>12/06/1994</del>	<del>5,371,017</del>	<del>Houghton et al.</del>	Duplicate citation.		

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	<del>1092.</del>	<del>06/01/89</del>	<del>WO89/04669</del>	<del>WIPO</del>	Duplicate citation.		

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↓	1095.	Pichuantes, S. et al., (1989) "Expression of authentic and enzymatically active HIV-1 proteinase in bacteria and yeast" in <u>Current Communications in Molecular Biology, Viral Proteases as Targets for Chemotherapy</u> , Cold Spring Harbor Laboratory Press, Krausslich, H. et al., Eds., pp. 215-222.
	1096.	McQuade et al., (1990) "A synthetic HIV-1 protease inhibitor with antiviral activity arrests HIV-like particle maturation" <i>Science</i> 247:454-456.
	1097.	Order Sustaining Plaintiff's Objection to Special Master's Order Re: Defendants Lilly and Vertex's Crime-Fraud Motion for the United States District Court for the Northern District of California for Civil Case No. C 98-02974 CW, between Plaintiff, Chiron Corporation and, Defendants, Eli Lilly and Co., Vertex Pharmaceuticals Inc., 14 pages.
/W.M./	1098.	Chiron Corporation's request for reexamination of the 5,371,017 patent, filed with the United States Patent and Trademark Office on October 8, 1999, 8 pages, with U.S. PTO Form 1449, 5 pages.

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<b>Form PTO-1449</b>  <b>INFORMATION DISCLOSURE CITATION IN A PATENT</b>  <i>(several sheets followed)</i>	Docket No. 223002010004	Application No.: 09/884,455
	Applicant: Michael Houghton et al.	
	Filing Date: June 18, 2001	Group Art Unit: 1656
	Delivery Date: September 4, 2009	

Examiner Initials	Ref. No.	OTHER DOCUMENTS <i>(including author, title, date, etc.)</i>
/W.M./	1099.	Order Granting Request for Reexamination of the 5,371,017 patent, control no. 90/005,512, issued on December 22, 1999, paper no. 5, 3 pages, and intialled Form 1449 (5 pages), and Notice of Reexamination Request Filing Date, one page (paper no. 3).
	1100.	Order Granting Request for Reexamination of the 5,371,017 patent, control no. 90/005,582, issued on February 22, 2000, paper no. , 4 pages, with U.S. PTO Form 1449.
	1101.	Office Action in Reexamination of the 5,371,017 patent, issued on November 9, 2000, paper no. 6, 4 pages.
	1102.	Chiron Corporation's request for reexamination of the 5,585,258 patent, filed with the United States Patent and Trademark Office on October 8, 1999, 7 pages, with U.S. PTO Form 1449, 5 pages.
	1103.	Order Granting Request for Reexamination of the 5,585,258 patent, control no. 90/005,513, issued on December 22, 1999, paper no. 5, 5 pages, and intialled Form 1449 (5 pages), and Notice of Reexamination Request Filing Date, one page (paper no. 3).
	1104.	Office Action in Reexamination of the 5,585,258 patent, issued on November 9, 2000, 5 pages.
	1105.	Patent Owner's Response to Office Action in Reexamination of the 5,585,258 patent, under 37 C.F.R. §1.550(b) filed on February 20, 2001, 15 pages, with Exhibits A-M.
	1106.	Chiron Corporation's request for reexamination of the 5,397,691 patent, filed with the United States Patent and Trademark Office on October 8, 1999, 7 pages, with U.S. PTO Form 1449, 5 pages.
	1107.	Order Granting Request for Reexamination of the 5,397,691 patent, control no. 90/005,514, issued on December 22, 1999, paper no. 5, 4 pages, and intialled Form 1449 (5 pages).
	1108.	Office Action in Reexamination of the 5,397,691 patent, issued on November 9, 2000, 4 pages.
	1109.	Patent Owner's Response to Office Action in Reexamination of the 5,397,691 patent, under 37 C.F.R. §1.550(b) filed on February 20, 2001, 15 pages, with Exhibits A-M.
/W.M./	967.	Memorandum by Dr. Michael Houghton (undated); (previously considered in US 08/103,961, reference I.A.116).

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